

Company Aylward Drilling Company Lease & Well No. Doherty #4
 Elevation ----- Formation Mississippi Effective Pay ---- Ft. Ticket No. 6918
 Date 10/4/80 Sec. 12 Twp. 32S Range 12W County Barber State Kansas
 Test Approved by Ken Hamlin Western Representative Roger A. Mounts
 Formation Test No. 1 Interval Tested from 4210 ft. to 4250 ft. Total Depth 4250 ft.
 Packer Depth 4205 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4210 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4217 ft. Recorder Number 1566 Cap. 4300
 Bottom Recorder Depth (Outside) 4220 ft. Recorder Number 3086 Cap. 4500
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor Graves Drlg. Rig #1 Drill Collar Length 120 I. D. 2.2 in.
 Mud Type chemical Viscosity 47 Weight Pipe Length - I. D. - in.
 Weight 9.4 Water Loss 18.8 cc. Drill Pipe Length 4070 I. D. 3.8 in.
 Chlorides 15,500 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
 Jars: Make No Serial Number - Anchor Length 40 ft. Size 5 1/2 OD in.
 Did Well Flow? Yes Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Good strong blow (no gas) initial flow. Gas to surface five minutes on final flow. See attached sheet for gas measurements.

Recovered 75 ft. of gas cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 1:55 ~~A.M.~~ P.M. Time Started Off Bottom 4:25 ~~A.M.~~ P.M. Maximum Temperature 102°
 Initial Hydrostatic Pressure 2109 P.S.I. (A)
 Initial Flow Period 30 Minutes (B) 65 P.S.I. to (C) 65 P.S.I.
 Initial Closed In Period 33 Minutes (D) 1253 P.S.I.
 Final Flow Period 60 Minutes (E) 73 P.S.I. to (F) 62 P.S.I.
 Final Closed In Period 30 Minutes (G) 1116 P.S.I.
 Final Hydrostatic Pressure 2109 P.S.I. (H)

GAS FLOW REPORT

Date 10/4/80 Ticket 6918 Company Aylward Drilling Company
 Well Name and No. Doherty #4 Dst No. 1 Interval Tested 4210' - 4250'
 County Barber State Kansas Sec. 12 Twp. 32S Rg. 12W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Meria Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
Strong blow (No gas to surface)						PRE FLOW

Gas to surface five minutes.				SECOND FLOW	
5 min.	10" of water	1/4" orifice	5,320 CFPD		
10 min.	20" of water	1/4" orifice	7,510 CFPD		
15 min.	36" of water	1/4" orifice	10,100 CFPD		
20 min.	44" of water	1/4" orifice	11,100 CFPD		
30 min.	48" of water	1/4" orifice	11,600 CFPD		
40 min.	50" of water	1/4" orifice	11,900 CFPD		
50 min.	52" of water	1/4" orifice	12,100 CFPD		
60 min.	52" of water	1/4" orifice	12,100 CFPD		

GAS BOTTLE

Serial No. --- Date Bottle Filled --- Date to be Invoiced 10/4/80

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Aylward Drilling Company
 Authorized by Ken Hamlin

WESTERN TESTING CO., INC.

Pressure Data

Date 10-4-80 Test Ticket No. 6918
 Recorder No. 1566 Capacity 4300 Location 4217 Ft.
 Clock No. - Elevation - Well Temperature 102 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2109 P.S.I.	Open Tool	1:55P M	
B First Initial Flow Pressure	65 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	65 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D Initial Closed-in Pressure	1253 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	73 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	62 P.S.I.			
G Final Closed-in Pressure	1116 P.S.I.			
H Final Hydrostatic Mud	2109 P.S.I.			

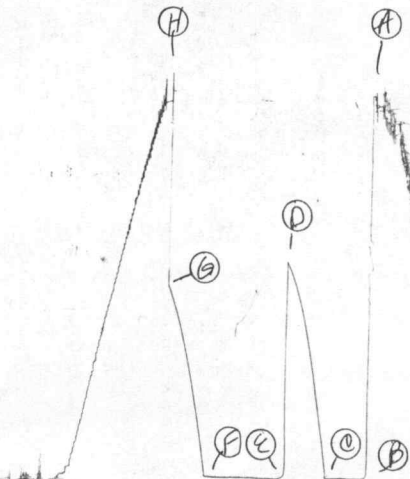
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>11</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>10</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>65</u>	<u>0</u>	<u>65</u>	<u>0</u>	<u>73</u>	<u>0</u>	<u>62</u>
P 2 <u>5</u>	<u>65</u>	<u>3</u>	<u>261</u>	<u>5</u>	<u>58</u>	<u>3</u>	<u>218</u>
P 3 <u>10</u>	<u>65</u>	<u>6</u>	<u>426</u>	<u>10</u>	<u>58</u>	<u>6</u>	<u>350</u>
P 4 <u>15</u>	<u>65</u>	<u>9</u>	<u>566</u>	<u>15</u>	<u>59</u>	<u>9</u>	<u>485</u>
P 5 <u>20</u>	<u>65</u>	<u>12</u>	<u>705</u>	<u>20</u>	<u>60</u>	<u>12</u>	<u>598</u>
P 6 <u>25</u>	<u>65</u>	<u>15</u>	<u>815</u>	<u>25</u>	<u>61</u>	<u>15</u>	<u>714</u>
P 7 <u>30</u>	<u>65</u>	<u>18</u>	<u>910</u>	<u>30</u>	<u>62</u>	<u>18</u>	<u>815</u>
P 8		<u>21</u>	<u>998</u>	<u>35</u>	<u>62</u>	<u>21</u>	<u>897</u>
P 9		<u>24</u>	<u>1071</u>	<u>40</u>	<u>62</u>	<u>24</u>	<u>970</u>
P10		<u>27</u>	<u>1139</u>	<u>45</u>	<u>62</u>	<u>27</u>	<u>1034</u>
P11		<u>30</u>	<u>1199</u>	<u>50</u>	<u>62</u>	<u>30</u>	<u>1116</u>
P12		<u>33</u>	<u>1253</u>	<u>55</u>	<u>62</u>		
P13				<u>60</u>	<u>62</u>		
P14							
P15							
P16							
P17							
P18							
P19							
P20							

1566

JKF # 6918

I



Company Aylward Drilling Company Lease & Well No. Doherty #4
Elevation ----- Mississippi Formation Effective Pay --- Ft. Ticket No. 6919
Date 10/4/80 Sec. 12 Twp. 32S Range 12W County Barber State Kansas
Test Approved by Ken Hamlin Western Representative Roger A. Mounts
Formation Test No. 2 Interval Tested from 4250 ft. to 4270 ft. Total Depth 4270 ft.
Packer Depth 4245 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4250 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4263 ft. Recorder Number 1566 Cap. 4300
Bottom Recorder Depth (Outside) 4260 ft. Recorder Number 3086 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Graves Drilling Rig #1 Drill Collar Length 120 I. D. 2.2 in.
Mud Type drispac Viscosity 47 Weight Pipe Length - I. D. - in.
Weight 9.4 Water Loss 18.8 cc. Drill Pipe Length 4110 I. D. 3.8 in.
Chlorides 15,500 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
Jars: Make No Serial Number - Anchor Length 20 ft. Size 5 1/2 OD in.
Did Well Flow? No Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very weak blow initial flow period (died in ten minutes). Blow returned final flow fair with build.

Recovered 20 ft. of slightly oil cut mud

Recovered 60 ft. of heavy oil cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 1:54 A.M. Time Started Off Bottom 4:54 A.M. Maximum Temperature 103°
Initial Hydrostatic Pressure 2128 P.S.I.
Initial Flow Period 30 Minutes (B) 54 P.S.I. to (C) 43 P.S.I.
Initial Closed In Period 30 Minutes (D) 207 P.S.I.
Final Flow Period 60 Minutes (E) 58 P.S.I. to (F) 56 P.S.I.
Final Closed In Period 60 Minutes (G) 418 P.S.I.
Final Hydrostatic Pressure 2119 P.S.I. (H)

WESTERN TESTING CO., INC.
Pressure Data

Date 10-4-80 Test Ticket No. 6919
Recorder No. 1566 Capacity 4300 Location 4263 Ft.
Clock No. - Elevation - Well Temperature 103 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2128 P.S.I.	Open Tool	1:54A M	
B First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	43 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	207 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	58 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	56 P.S.I.			
G Final Closed-in Pressure	418 P.S.I.			
H Final Hydrostatic Mud	2119 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>20</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>54</u>	<u>0</u>	<u>43</u>	<u>0</u>	<u>58</u>	<u>0</u>	<u>56</u>
P 2 <u>5</u>	<u>54</u>	<u>3</u>	<u>45</u>	<u>5</u>	<u>52</u>	<u>3</u>	<u>63</u>
P 3 <u>10</u>	<u>43</u>	<u>6</u>	<u>54</u>	<u>10</u>	<u>52</u>	<u>6</u>	<u>76</u>
P 4 <u>15</u>	<u>43</u>	<u>9</u>	<u>69</u>	<u>15</u>	<u>52</u>	<u>9</u>	<u>95</u>
P 5 <u>20</u>	<u>43</u>	<u>12</u>	<u>84</u>	<u>20</u>	<u>52</u>	<u>12</u>	<u>104</u>
P 6 <u>25</u>	<u>43</u>	<u>15</u>	<u>104</u>	<u>25</u>	<u>52</u>	<u>15</u>	<u>121</u>
P 7 <u>30</u>	<u>43</u>	<u>18</u>	<u>121</u>	<u>30</u>	<u>54</u>	<u>18</u>	<u>138</u>
P 8		<u>21</u>	<u>143</u>	<u>35</u>	<u>54</u>	<u>21</u>	<u>156</u>
P 9		<u>24</u>	<u>166</u>	<u>40</u>	<u>55</u>	<u>24</u>	<u>173</u>
P10		<u>27</u>	<u>184</u>	<u>45</u>	<u>56</u>	<u>27</u>	<u>190</u>
P11		<u>30</u>	<u>207</u>	<u>50</u>	<u>56</u>	<u>30</u>	<u>210</u>
P12				<u>55</u>	<u>56</u>	<u>33</u>	<u>227</u>
P13				<u>60</u>	<u>56</u>	<u>36</u>	<u>244</u>
P14						<u>39</u>	<u>266</u>
P15						<u>42</u>	<u>285</u>
P16						<u>45</u>	<u>305</u>
P17						<u>48</u>	<u>324</u>
P18						<u>51</u>	<u>346</u>
P19						<u>54</u>	<u>368</u>
P20						<u>57</u>	<u>392</u>
						<u>60</u>	<u>418</u>

1564

JKT #6919

I

